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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,624	12/19/2000	Julian D. Warhurst	107047-0003	9878

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EXAMINER

QUAN, ELIZABETH S

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 01/28/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/740,624

Applicant(s)

WARHURST ET AL.

Examiner

Elizabeth Quan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: The sentence on lines 7-9 on page 3 is ambiguous. A possible modification is: Microplate 4 is conventionally designed and available from a number of commercial sources in 24, 96, 384, or other well formats. On line 12 of page 4 "swaged over tabs" is unclear.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 7 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent No. 5,056,427 to Sakabe et al.

Referring to claims 1 and 7, Sakabe et al. disclose a thermal reaction apparatus comprising an elastic sheet (11) filled with silicone oil (10) sealed within a double layer structure, upper thermo-conductive plate (27), and upper heater (28) sequentially superimposed upon tray (20) within upper base (29) (see FIG. 2; COL. 2, lines 31-34 and 43-48). By applying appropriate pressure to upper base (29) the silicone oil (10) is displaced with the elastic sheet (11) to compensate for different levels of the openings of the cavities (21) to exert uniform pressure distribution to the upper face of the tray (20) to

provide an effective seal against evaporation (see FIG. 2; COL. 2, lines 43-63).

Therefore, Sakabe et al. include all the limitations of claims 1 and 7.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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7. Claims 2, 5, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,056,427 to Sakabe et al. in view of U.S. Patent No. 6,159,368 to Moring et al.

Referring to claims 2, 5, 8, and 10, Sakabe et al. do not disclose tabs as part of the thermal reaction apparatus. Moring et al. disclose a multi-well microfiltration apparatus with a cover (150) secured to multi-well tray (24) by a releasable attachment means (see FIGS. 11-14; COL. 28, lines 43-44). The attachment means include resiliently deflectable arms (184), which are downwardly-extending tabs, depending from opposing lateral sides of the upper shell portion (154) (see FIGS. 11-14; COL. 28, lines 43-47). The structure of cover (150) facilitates automated handling by robotic arm (200) (see COL. 29, lines 11-30). Moring et al. do not disclose a pressure plate with tabs; however, it is well known to use tabs as necessary as protrusions to facilitate automation whether indirectly by not obstructing robotic handling or directly as grasp tabs. Furthermore, in order to accommodate stacking of cover assemblies, the tab must be downwardly-extending to avoid thrusting beyond the upper surface of the cover. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include downwardly-extending and laterally depending tabs of Moring et al. to the upper base and upper plate of Sakabe et al. to facilitate automated movement and accommodate stacking.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,056,427 to Sakabe et al. in view of U.S. Patent No. 4,420,080 to Nakamura and in further view of U.S. Patent No. 3,883,398 to Ono.

Referring to claim 3, Sakabe et al. do not disclose apertures on the cover's lateral sides. Nakamura does disclose a container (1) with opening (2) and flap (3) with a pressure-sensitive adhesive surface (4) facing main body (1) and non-adhesive member (5) adhered to the surface (4) corresponding to opening (2) in the main body (1) (see FIGS. 1-5; COL. 3, lines 53-62). The flap (3) covers the opening (2), and the state of contents may be revealed through a transparent flap (3) and closing member (5) (see COL. 3, lines 46-48). While the flap is not located on the cover's lateral sides, Ono disclose a microculture slide chamber (10) with a longer slide (12) and protruding frosted portion (13) for viewing a label both positioned on the side (see FIG. 1; COL. 2, lines 51-56). Additionally, both Nakamura and Ono disclose single aperture. However, the Federal Circuit in *Gardner v. TEC Systems, Inc.* held that relative dimension as the only difference between prior art and claimed invention would not affect the performance of the claimed invention relative to the prior art invention, and therefore would not be a patentably distinct limitation. To accommodate the number of labels for viewing or viewing preferences, a plurality of apertures may be provided for the reaction apparatus without affecting its performance. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the thermal reaction apparatus of Sakabe et al. to provide openings as desired for the number of viewing labels or viewing preference as in Nakamura and Ono to accommodate label identification and viewing of contents in the apparatus.

9. Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,056,427 to Sakabe et al. in view of U.S. Patent No. 5,604,103 to Warner et al.

Referring to claims 4 and 9, Sakabe et al. do not disclose a ridge extending the length and central axis of the upper base. Warner et al. do disclose a cover (34) containing a pad (40) of flexible polymer sheet (54), defining a planar expanse (56) with an array (42) of resiliently compressible ridges (44, 46) extending in a width-wise and length-wise direction (see FIGS. 2B and 3; COL. 4, lines 11-22). With the application of a downward force onto the cover (34), the deformable ridges (44, 46) compresses in regions where ridges contact the edge of the opening of a well (28) (see FIGS. 5A-5D; COL. 5, lines 49-67; COL. 6, lines 1-9). Warner et al. do not disclose ridges on the top side of the cover (34); however, it would appear the placement of ridges depends on the desired degree of pressure application and effective seal. Furthermore, ridge placement on the top side of the cover would create a direct shock absorber rather than ridges on the bottom. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the thermal reaction apparatus of Sakabe et al. to include ridges at the top of the cover to bear the application of downward pressure.

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,056,427 to Sakabe et al. in view of U.S. Patent No. 3,883,398 to Ono.

Referring to claim 6, Sakabe et al. do not disclose a metal pressure plate. However, Ono discloses a rectangular pressure plate (28) preferably made of stainless steel (see FIG. 1; COL. 3, lines 20-22). While Ono does not explicitly state why the pressure plate is rectangular and made of stainless steel, it appears the rectangular pressure plate is configured to fit onto conventional well tray, which are rectangular, and metal provides greater pressure on the layer and would require less pressure to affect a

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better seal. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the thermal reaction apparatus of Sakabe et al. to include a rectangular, metal pressure plate to fit upon conventional well trays and provide greater pressure with less application.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Quan whose telephone number is (703) 305-1947. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (703) 308-4037. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1193.

Elizabeth Quan
Examiner
Art Unit 1743

eq
January 16, 2002


Jill Warden
Supervisory Patent Examiner
Technology Center 1700